

## CLAIMS

SUB  
B1

1 ✓ 1. A method of treating a loose skin surface overlying a collagen  
2 tissue site, comprising:  
3 identifying a person suspected of having a the loose skin surface;  
4 providing an energy source with an energy delivery surface;  
5 positioning the energy delivery surface on the loose skin surface;  
6 creating a reverse thermal gradient, wherein a temperature of the skin  
7 surface is less than a temperature of the collagen containing tissue;  
8 delivering a sufficient amount of energy through the skin surface to  
9 contract at least a portion of the collagen containing tissue with controlled cell  
10 necrosis in the skin surface; and  
11 tightening the loose skin surface.

SUB  
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1 2. The method of claim 1, wherein a sufficient amount of energy is  
2 delivered through the loose skin surface without creating a substantial cell  
3 necrosis in the loose skin surface.

1 3. The method of claim 1, wherein a sufficient amount of energy is  
2 delivered through the loose skin surface with a reduced cell necrosis in a skin  
3 layer.

SUB  
B2

1 4. The method of claim 1, wherein a sufficient amount of energy is  
2 delivered through the loose skin surface and smoothen the loose skin surface.

1 5. The method of claim 1, wherein a sufficient amount of energy is  
2 delivered through the loose skin surface and improve a contour of the loose skin  
3 surface.

1 6. The method of claim 1, wherein a sufficient amount of energy is  
2 delivered through the loose skin surface and reduce a scarring of the loose skin  
3 surface.

1 SUB B2 7. The method of claim 1, wherein a sufficient amount of energy is  
2 delivered through the loose skin surface and reduce a wrinkling of the loose skin  
3 surface.

1 8. The method of claim 1, wherein the energy source is an RF energy  
2 source.  
3

1 9. The method of claim 8, further comprising:  
2 an RF electrode coupled to the RF energy source, the RF electrode  
3 including an RF energy delivery surface positionable on the loose skin surface.

1 10. The method of claim 9, further comprising:  
2 a source of electrolytic media coupled to RF electrode.  
3

1 11. The method of claim 10, wherein the electrolytic media is an  
2 electrolytic solution.  
3

1 12. The method of claim 10, wherein the electrolytic media is an  
2 electrolytic gel.  
3

1 13. The method of claim 1, wherein the energy source is a light  
2 source.  
3

1 SUB B4 14. The method of claim 11, wherein the light source is a coherent  
2 light source.  
3

1 15. The method of claim 12, further comprising:  
2 a coherent light delivery device configured to be coupled to the coherent  
3 light source.

1 16. The method of claim 11, wherein the light source is an incoherent  
2 light source.

1 17. The method of claim 1, wherein the energy source is a microwave  
2 source.

1 18. The method of claim 17, wherein the energy source is an  
2 ultrasound source.

1 19. The method of claim 1, wherein the collagen containing tissue is  
2 partially denatured by cleaving heat labile cross-links of collagen molecules.

1 20. The method of claim 1, further comprising:  
2 a cooling medium configured to create a cooling of the loose skin surface.

1 21. The method of claim 1, wherein the collagen containing tissue is in  
2 a subdermal layer.

1 22. The method of claim 1, wherein the collagen containing tissue is in  
2 a deep dermal layer.

1 23. The method of claim 1, wherein the collagen containing tissue is in  
2 a subcutaneous layer.

1 24. The method of claim 1, wherein the collagen containing tissue is in  
2 facial and muscle tissue.

1 25. The method of claim 1, wherein the temperature of the collagen  
2 containing tissue does not exceed 80 degrees C.

1 26. The method of claim 1, wherein the temperature of the collagen  
2 containing tissue does not exceed 75 degrees C.

1 27. The method of claim 1, wherein the temperature of the collagen  
2 containing tissue does not exceed 70 degrees C.

1 28. An apparatus for applying energy to a loose skin surface,  
2 comprising:

3 an identification means for detecting a loose skin surface;

4 an electrolytic media means;

5 an electrolytic media delivery means adapted to receive the electrolytic

6 media and release the electrolytic media to the loose skin surface;

7 an RF electrode means coupled to the electrolytic media means, wherein  
8 the electrolytic media means delivers energy to the loose skin surface to create a  
9 controlled cell necrosis and tighten the loose skin surface.

1 29. The apparatus of claim 1, wherein the electrolytic media is an  
2 electrolytic solution.

1 30. The apparatus of claim 1, wherein the electrolytic media is an  
2 electrolytic gel.

1 31. The apparatus of claim 28, wherein the RF electrode means is  
2 separated from the loose skin surface.

1 32. The apparatus of claim 28, wherein the RF electrode means is  
2 positioned in an interior of the electrolytic media delivery means.

1 33. The apparatus of claim 28, wherein the RF electrode means is  
2 positioned on an exterior surface of the electrolytic media delivery means.

1 34. The apparatus of claim 28, wherein the electrolytic media means  
2 receives sufficient energy from the RF electrode means to create a contraction of  
3 collagen in the skin.

1 35. The apparatus of claim 28, wherein the electrolytic media means  
2 receives sufficient energy from the RF electrode means to deliver energy through  
3 a papillary dermis layer.

1 36. The apparatus of claim 28, wherein the electrolytic media means  
2 receives sufficient energy from the RF electrode means to supply energy through a  
3 reticular dermis layer of the skin.

1 37. The apparatus of claim 28, wherein the electrolytic media means  
2 receives sufficient energy from the RF electrode means to supply energy through a  
3 subcutaneous layer of the skin and an underlying soft tissue.

1 38. The apparatus of claim 28, wherein the RF electrode means is  
2 coupled to an RF energy source.

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39. The apparatus of claim 28, further comprising:

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a sensor means coupled to loose skin surface.

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40. The apparatus of claim 28, further comprising:

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a feedback control means coupled to the sensor means and to an RF

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energy source means.

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41. ✓ A method for treating skin, comprising:

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identifying a person suspected of having a loose skin surface;

3

providing an apparatus for applying energy to the loose skin surface, the

4

apparatus including an electrolytic media, a member, and an RF electrode;

5

transferring energy from the RF electrode to the electrolytic media to

6

create an energy delivery electrolytic media;

7

releasing the energy delivery electrolytic media from the member to the

8

loose skin surface;

9

treating the loose skin surface with energy from the energy delivery

10

electrolytic media; and

11

tightening the loose skin surface.

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42. The method of claim 41, wherein a sufficient amount of energy is

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delivered through the loose skin surface without creating a substantial cell

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necrosis in the loose skin surface.

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43. The method of claim 41, wherein a sufficient amount of energy is

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delivered through the loose skin surface with a reduced cell necrosis in a skin

3

layer.

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44. The apparatus of claim 41, wherein the electrolytic media is an

2

electrolytic solution.

1           45.     The apparatus of claim 41, wherein the electrolytic media is an  
2 electrolytic gel.

1           46.     The method of claim 41, wherein energy from the energy delivery  
2 electrolytic media to the loose skin surface creates a controlled cell necrosis.

1           47.     The method of claim 41, wherein the energy delivery electrolytic  
2 media creates a tightening of the skin.

1           48.     The method of claim 41, wherein the energy delivery electrolytic  
2 media creates a tightening of a subcutaneous tissue.

1           49.     The method of claim 41, wherein the energy delivery electrolytic  
2 media receives sufficient energy from the RF electrode to create a controlled cell  
3 necrosis of the loose skin surface.

1           50.     The method of claim 41, wherein the energy delivery electrolytic  
2 media receives sufficient energy from the RF electrode to create a controlled zone  
3 of cell necrosis of the loose skin surface.

1           51.     The method of claim 41, wherein the energy delivery electrolytic  
2 media receives sufficient energy from the RF electrode to create a controlled zone  
3 of collagen contraction of a dermis and fibrous septae of a subcutaneous tissue.

1           52.     The method of claim 41, wherein the energy delivery electrolytic  
2 media receives sufficient energy from the RF electrode to create a controlled zone  
3 of loose skin surface ablation.

1           53.     The method of claim 41, wherein the energy delivery electrolytic  
2 media receives sufficient energy from the RF electrode to create a controlled zone  
3 of skin tightening.

1           54.     The method of claim 41, wherein the energy delivery electrolytic  
2 media receives sufficient energy from the RF electrode to create a controlled zone  
3 of subcutaneous tightening.

1           55.     The method of claim 41, wherein the electrolytic media receives  
2 sufficient energy from the RF electrode to create a contraction of collagen in the  
3 skin.

1           56.     The method of claim 41, wherein the electrolytic media receives  
2 sufficient energy from the RF electrode to create a controlled cell necrosis of the  
3 loose skin surface.

1           57.     The method of claim 41, wherein the electrolytic media receives  
2 sufficient energy from the RF electrode to supply energy through a papillary  
3 dermis layer.

1           58.     The method of claim 41, wherein the electrolytic media receives  
2 sufficient energy from the RF electrode to supply energy through a reticular  
3 dermis layer of the skin.

1           59.     The method of claim 41, wherein the electrolytic media receives  
2 sufficient energy from the RF electrode to supply energy through a subcutaneous  
3 layer and an underlying soft tissue.

1           60.     The method of claim 41, wherein the RF electrode receives a



2 controlled delivery of energy from an RF power source.

1 61. The method of claim 41, further comprising:  
2 sensing a temperature of the loose skin surface during delivery of the  
3 energy delivery electrolytic media to the loose skin surface.

1 62. The method of claim 41, further comprising:  
2 sensing a temperature of the loose skin surface after delivery of the energy  
3 delivery electrolytic media to the loose skin surface.

1 63. The method of claim 41, further comprising:  
2 sensing a temperature of a tissue underlying the loose skin surface during  
3 the delivery of the energy delivery electrolytic media to the loose skin surface.

1 64. The method of claim 41, further comprising:  
2 sensing a temperature of a tissue underlying the loose skin surface after  
3 delivery of the energy delivery electrolytic media to the loose skin surface.

1 65. The method of claim 41, further comprising:  
2 sensing an impedance of the loose skin surface during delivery of the  
3 energy delivery electrolytic media to the loose skin surface.

1 66. The method of claim 41, further comprising:  
2 sensing an impedance of the loose skin surface after delivery of the energy  
3 delivery electrolytic media to the loose skin surface.

1 67. The method of claim 41, further comprising:  
2 sensing an impedance of a tissue underlying the loose skin surface during  
3 the delivery of the energy delivery electrolytic media to the loose skin surface.

- 1                    68.     The method of claim 41, further comprising:  
2                    sensing an impedance of a tissue underlying the loose skin surface after  
3                    delivery of the energy delivery electrolytic media to the loose skin surface.

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